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John E. Downing
A TREATISE
Book ON THE *Disorders*
DISORDERS INCIDENT TO
HORNED CATTLE,
COMPRISING
A DESCRIPTION OF THEIR SYMPTOMS,
AND THE
Most Rational Methods of Cure,
FOUNDED ON LONG EXPERIENCE.
BY J. DOWNING.
TO WHICH ARE ADDED,
RECEIPTS FOR CURING
THE GRIPES, STAGGERS AND WORMS,
IN HORSES ;
AND AN APPENDIX,
CONTAINING
INSTRUCTIONS FOR THE EXTRACTING OF CALVES.

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PREFACE.

THE utility of a Treatise on the disorders of CATTLE, is a point that can hardly be disputed by any who are the least conversant with the subject, and a Publication similar in design to the following, has been acknowledged by FARMERS and GRAZIERs to have been long wanted, great numbers of CATTLE being lost for want of a proper knowledge of the best modes of treatment, when affected with the various maladies they are subject to.

The author having had a very extensive range of practice, for a considerable number of years, presents the following PRESCRIPTIONS to the public, under a well grounded consciousness of the important benefit that may result from their application.

FAIRFIELD,
Near Bromsgrove, Worcestershire.

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TREATISE.



OF THE FEVER IN THE BRAIN.

THE symptoms of this disorder, are constant watchings, ravings, slow respiration, a disturbed and frightful countenance, with the usual signs of madness; strong pulsation in the temporal artery, sometimes irregular, especially when the beast has been much agitated by exercise, &c. the beast falling down suddenly, fever augmenting gradually, a great dimness of sight, runnings at the nose, and a perpetual delirium, with a fierceness in the looks and actions, and a continual fever in the brain, the part originally affected.

This disorder is frequently occasioned by a suppression of natural evacuations, and may have for its cause an acute fever, wounds or contusions in the head, great heat of the blood, producing an inflammation of the vessels of the brain, stagnation, putrefaction, or mortification, great pain in the head, convulsive motions, &c.

It requires the most powerful remedies to be administered without delay, and such as are able to remove the inflammation from the arteries in the head.

In the first place, bleed freely and repeatedly, duly considering the strength and bulk of the beast. You will find the jugular vein near twice its usual substance: these large and repeated bleedings, will greatly unload the arteries in the brain: keeping the body open is of great service in hot fevers or inflammations, as it purges and rectifies the blood.

Then give the following medicines:

TAKE Epsom salts, four ounces,
Nitre in powder, two ounces,
Cream of tartar, two ounces,
Valerian powder, two ounces.

Mix these together for two doses, one to be given in a quart of thin gruel or cammomile tea, and repeated every twelve hours. The beast should fast two hours before taking the medicine and two hours after.

TREATMENT.

The beast should be kept up where it will receive some fresh air; give it some scalded bran, or scalded oats, and warm water. Should it not eat or drink, drench it with cammomile tea twice or three times a day.

This medicine is cooling and laxative, it works its passage through the bowels, without causing any griping, it thins the blood, and dilutes its siziness, it opens obstructions, and extinguishes the inflammatory lentor; it repels its fury and humours residing in the head, and thereby restores the affected vessels to their former state.

FURTHER TREATMENT.

If the beast continues two days little or no better, and does not eat or drink ; give it two quarts of water gruel, about three times a day for nourishment.

Then the following medicine must be given :

TAKE nitre, powdered, one ounce, twenty drops of oil of vitriol dropped into the nitre and rubbed well together in a mortar, when the infusion is gone, add one ounce of valerian powder, one ounce of Virginian snake root powder, to be mixed for one dose, and given in a quart of cammomile tea and half a pound of treacle ; repeat the dose every twenty-four hours.

I have found the jaws inflamed, with a rough hard substance mounting up the head ; this often creates great pain to animals thus afflicted, also great heart-beating, and pulsations in the part affected ; they work and toss with great labour, and are frothy at the mouth.

OUTWARD APPLICATION.

TAKE Castile soap, three ounces,
Opium, two ounces,
Rectified spirits of wine, eight ounces,
Camphire, 6 ounces.

Let these be well mixed over a slow fire. As much of this mixture may be applied warm to the swelled part of the jaws, as will well

moisten the part. To be used two or three times a day.

This mixture has not its equal in the whole extent of medicine, for procuring ease in the most excruciating pains, particularly in the glandulous parts of the body.

Take two quarts of blood from the beast, and give the following drink.

Two ounces of glauher salts,
One ditto of nitre,
Two ditto of diapente.

These to be mixed for one dose, and given in a quart of thin gruel, to be repeated in twenty-four hours after, if necessary. The beast to fast two hours before and two after taking the medicine, and then to have any sort of food it will eat or drink.



OF THE INFLAMMATION IN THE BRAIN, RESEMBLING MADNESS.

THIS is an inflammation of the substance of the brain itself and its membranes, occasioning a perpetual delirium, and a continued acute fever.

The symptoms are as much like those of the fever of the brain as possible, and require the same treatment. This disease and all inflammations of the brain require large and repeated bleedings, in order to abate their pro-

ceedings and bring about a regular motion of the pulse.

In the first place, a large quantity of blood must be let out of a large orifice, duly considering the strength and bulk of the beast, then give the following medicine.

TAKE Epsom salts, four ounces,
Nitre in powder, two ounces,
Cream of tartar, two ounces.

Mix these together for one dose, to be given in a quart of thin gruel, and repeated every twelve hours. The beast to fast two hours before and two after taking the medicine.

In these disorders, no hot or stimulating medicine must be given, but such only as are of a cooling quality, and will powerfully dilute the blood, so as to unload the arteries in the brain.

TREATMENT.

Give the beast one quart of water gruel, several times a day, and warm water for many days after it will eat its usual food. If the beast is found too weak for the above medicine, give the following :

Glauber salts, two ounces,
Nitre, one ditto,
Cream of tartar, one ditto,
Best liquorice, powdered, ditto.

To be given as before.

OF A LETHARGY, OR WHAT IS COMMONLY CALLED
A SLEEPING FEVER.

A lethargy, is a disease caused by cold phlegmatic humours, oppressing the brain, so as to deprive the animal of its spirits, and occasion a dull sleepiness.

This disease is not a putrifying phlegm in the brain, but a slight inflammatory disposition of the whole substance of the brain, proceeding from blood that is forced out of its proper vessels, and dispersed through it; and from this cause a change in the work of nature, and those symptoms appearing may be easily understood.

The sleepiness or dozing to which the beast thus affected is inclined to, does not proceed from a total obstruction in the brain, for that would be an apoplexy, but it proceeds from a slight obstruction of the blood, which slightly inflames the brain, by clogging its substance, and therefore motion is necessary to keep the animal awake and alive.

Bleeding in this case is requisite, but in a more sparing manner than in disorders of a more inflammatory kind. If the blood is found buffy after standing some time, it indicates that evacuations are necessary, and to be repeated as circumstances may require. After the first bleeding, strong and powerful medicines must be given, in order to thin the curdled or condensed blood and create perspiration; they are therefore necessary in all lethargic disorders, they take off that heavy oppression

from the smaller vessels of the brain, the compact state and confinement of which, by a stagnation of the blood, obstructing its natural motions and courses, stops the pores of the skin, renders the beast dull and inactive, and produces numberless disorders.

REMEDY.

Bleeding is indispensably necessary in some degree, and, if well timed, often proves almost a cure, by the assistance of warm coverings, and frequent frictions, or rubbing with wisps of straw, or other suitable materials.

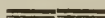
TAKE Valerian, in powder, one ounce,
Gentian, in powder, two ounces,
Virginian snake-root, in powder, one ounce.

Mix these together in a quart of penny-royal tea; give it the beast milk warm, and repeat it every twelve hours. Fast two hours before and two after taking the medicine.

This medicine abates the painful heat of the contracted vessels, lessens its quantity, and gently promotes perspiration; it puts the blood into a brisk motion, whereby it breaks the curdled or condensed, so as to render the fluids able to perform their courses; it strengthens the stomach, disperseth wind, refreshes the spirits, and confirms the tone of the nerves.

TREATMENT.

Keep the beast warm, and give it warm water and dry food. If it will not take that food or drink any water, give it bitter teas made of cammomile, feverfew, and balm; one handful of each infused in boiling water; give one pint every three or four hours, with a large spoonful of treacle in each pint.



OF A GIDDINESS, OR SWIMMING IN THE HEAD.

THIS giddiness and swimming in the head, is a distemper chiefly belonging to the cavities of the eyes, and the optic nerves; it causes distant objects to appear to the sight to turn round, and gives a wavering and staggering motion to the body:—for if the optic nerve, or its expansion in the bottom of the eye, called the retina, be agitated by any preternatural heat, or other emotion, the image of distant bodies will change their situation on the retina, and consequently the objects themselves will appear to move, this being consistent with the nature of vision, it is reasonable to suppose that this disorder is a fever, chiefly affecting the cavities of the eyes and the optic nerves.

Bleeding is of great efficacy in this disorder, and should by no means be omitted, but repeated as occasion may require.

TAKE Valerian root, in powder, one ounce,
 Virginian snake-root, in powder, two ditto,

Venice treacle, half an ounce,
Depurated nitre, half an ounce.

Mix these together for one dose, to be given in a quart of rosemary tea, milk warm, and repeated every twelve hours. The beast should fast two hours before and two after.

Or give the following :

TAKE Valerian, in powder, one ounce,
Rhubarb, in powder, three drachms,
Camphire, in powder, two drachms,
Nitre, in powder, two ounces.

Mix these together in a quart of cammomile tea, and add one ounce of spirits of hartshorn to it, give it the beast milk warm, and repeat the dose every twenty-four hours.

These medicines are of the greatest efficacy in promoting insensible perspiration ; are well adapted for the removal of complaints arising from obstructions in the pores of the skin, and distempers which owe their origin to grumes, like the white of an egg, that stuff the vessels, and suppress the necessary motion of the nervous fluids. They powerfully attenuate the cloggy disposition of the blood, and gradually invigorate the whole body, they will almost infallibly remove the symptoms attendant on this disorder, and finally expel the obstinacy thereof.

TREATMENT.

The beast should have bran mashes and plenty of warm water. If it will not eat the bran,

gather some grass dry, free from dew or rain, and give it that. After the beast begins to get better, great care must be taken to shelter it from severe weather, either wet or cold, or violent heat; the milder state it is kept for seven or eight days on the recovery, the better.

OF THE INFLAMMATION OF THE LUNGS, COMMONLY CALLED THE RISING OF THE LIGHTS.

THE production of this disorder is brought on by dry cold winds, for when cold air is continually admitted into the lungs, it corrugates their internal membranes, shuts up their excretory ducts, and hinders a due exhalation, and perspiration of the surcharges from the retained perspirables; for the air by its great degree of coldness and nearness to the blood vessels in the lungs, is apt to congeal, at least greatly to condense it. This disease in general occurs from the beast sometimes drinking too much cold water, which commonly happens after sudden heats; or the keeping it too long from any water, or when turned into fresh aftermath pastures, that contain great dews, and white frost in the season.

The symptoms are a great difficulty in breathing, attended with a cough or hoarse, opening the mouth, putting out the tongue, often a ropy slime will run out of the mouth in abundance, also at the nose a watery substance, which sticks like glue to the inside of the nos-

trils : the eyes look dull, and the pulse is hard, the mouth is harsh and dry, the skin stiff, and all the external parts cold, but coldness especially of the legs, ears, and roots of the horns, always attend this disease. The beast always appears full, somewhat resembling those swelled by clover. It grunts as it walks, and goes down hill with much difficulty, holding down its head low, and putting forward the nose, as it cannot move in its proper posture, being so inwardly sore.

REMEDY.

In the first place bleed freely, which if well timed and executed (having particular regard to the strength and constitution of the beast, and likewise the symptoms of the disease) will sometimes effect a cure.

When bled, let the beast be allowed plenty of room and free air ; likewise frictions on the legs of the beast, in order to increase the circulation, and promote warmth of the extremities, by that means the increased force of the circulation from the centre to the circumference is restored.

Then give the following medicine :

TAKE Nitre, in powder, three ounces,
Salt of tartar, two ounces,
Elecampane powder, three ounces,
Turmeric powder, two ounces,
Rhubarb, in powder, half an ounce.

Mix these for two doses, to be given in a

quart of cammomile tea, add half a pint of cold drawn linseed oil to each dose, and repeat it every twenty-four hours. Fasting two hours before and two afterwards.

Or this :

TAKE Salts, one ounce,
 Nitre, one ounce,
 Salts of wormwood, one ounce,
 Turmeric, one ounce,
 Oil of aniseed, quarter of an ounce,
 Sulphur, half an ounce.

Mix these for one dose, to be given as above.

This medicine deserves great praise ; it disperses pituitous skins, and the sily blood, dissolves its close contexture, and renders it fit to shed off its serum ; it also cleanseth the urinary pipes, and moves urine very powerfully, even beyond expectation : it is endowed with a mucilaginous, soft and friendly quality, maturing crude phlegm collected in the lungs, it dissolves the concreted, extravasated and coagulated blood, depurates fecculent humours, opens the obstructed pulmonic vessels in the lungs, and returns the blood again into the circulating channels without kindling any pain ; it corroborates the parts that are hurt, conglutinates and heals them, it obtunds the acrimonious particles of the blood, and brings on a mild perspiration, raises and supports the drooping spirits, resists malignity, and drives it out from the centre to the circumference, and effectually cures the disease.

TREATMENT.

The beast must have warm water until it recovers, and give it any kind of food it will eat: be careful the beast does not drink too much cold water at a time: I have often known a relapse from that cause. Bleed every third day while the malady continues.



OF THE MURRAIN, OR BLACK LEG; WHICH IS ALSO KNOWN BY SEVERAL OTHER NAMES IN DIFFERENT COUNTRIES.

THIS distemper is incident to young cattle, it often begins with a swelling, attended with lameness and a mortifying blackness: this swelling will alarm you with a crackling noise, like a blown bladder when rubbed with your hand, and the part becomes insensible. It sometimes begins in the mouth, other times in the head, back or belly, but most commonly makes its appearance in the legs, which causeth immediate stiffness and lameness.

It is a matter of the greatest importance to manage so as to reduce the crackling or swelling, for on the proper management of it depends the whole cure.

In the first place, foment round the sides of the swelling, with the following mixture:

TAKE Oil of turpentine, four ounces,
Vinegar, four ounces, \\
Oil of vitriol, two ounces.

Mix these together.

This application is in order to suppress the rapid progress of the morbid humours, till proper endeavours are made to extirpate the morbid matter. In short, the chief part of the management consists, in clearing the mortifying substance. Take a sharp knife and make an incision the whole length of the swelling, and then separate all the black substance, till the communication betwixt living and dead flesh is totally divided: when the mortified matter is wholly cut away, the sound parts will bleed freely, which will be a good symptom. Do not be too hasty in stopping the blood. Dress the wound afterwards with the following:

TAKE Spirits of turpentine, two ounces,
Spirits of sal ammoniac, two ounces,
Honey, one ounce.

Mix these, and fill the cavity of the wound with pledgets of tow.

The next dressing the wound ought to be well bathed with a fomentation made of aromatic plants, such as wormwood, tansey, camomile, bay leaves, and rosemary, of each one handful, to be boiled in a gallon of strong drink grounds; add spirits of wine and camphire and sal ammoniac, of each two ounces to it; this will make the wound digest, by which the matter will separate. Afterwards it may be treated as any common wound or ulcer.

When this distemper begins in the mouth, the symptoms are evident, by the mouth being generally open and a matter falling therefrom: by opening the mouth you will find upon one or both sides of the tongue, a large blackish coloured substance, which will easily yield to the pressure of your finger.

THE METHOD OF TREATMENT.

First gag the cow, then take a sharp knife and totally cut all the discoloured flesh from the sound substance, which may be done by guiding the knife in your hand in a suitable manner, according to its situation; then dress the wound with the following :

TAKE *Ægyptiacum*, two ounces,
 Camphorated spirits of wine, two ounces,
 Honey, two ounces.
 Oil of vitriol, one ounce.

Mix them, and let the wound be dressed three or four times a day, till the discharge thereof be of a good kind of matter.

Give the following medicine :

TAKE *Æthiop's mineral*, one ounce,
 Liver of antimony, in powder, one ounce,
 Flowers of sulphur, one ounce,
 Nitre, in powder, one ounce,
 Valerian, in powder, one ounce.

Mix these for one dose, to be given in a quart of cammomile tea, and repeat it once a day, for several days. The beast should fast two hours before and two afterwards.

This medicine opens obstructions, invigorates the fluids, and moves the circulation till the morbid matter is thrown off, by separating the various fluids of the body.

TREATMENT.

Bleed the beast and keep it by itself, as this disease is very catching. Give a quart of herb grass tea three or four times a day, that will help to fine and thin the blood, and let it have the usual food.



TO PREVENT THE MURRAIN.

This medicine might be given to any beast as a preservative against the murrain.

THE MEDICINE.

TAKE Myrrh, in powder, one ounce,
 Epsom salts, two ounces,
 Flowers of sulphur, one ounce,
 Liver of antimony, in powder, half an ounce,
 Diapente powder, one ounce.

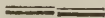
Mix these together for one dose, and give it in a quart of strong rue tea, and take two quarts of blood from the beast. Fast as before-mentioned.

SETONING.

A Seton in the dew lap, is very necessary ; if it takes the desired effect, it will swell very much and discharge plentifully. The method is to cut a small orifice through the skin, then divide the skin from the flesh about two inches ; take a small slice of bearsfoot about one inch long, and two of red dock root ; place one on each side the bearsfoot, then fix it in the cavity with a little tow and fresh liquor. Keep stirring it daily after it begins to discharge.

ANOTHER METHOD OF SETONING.

Take some platted hair and draw through betwixt the skin and the flesh, and anoint the platted hair with horse turpentine. There must be a knot left at each end, as it may be moved backwards and forwards every day, and it should be anointed each day for the first two or three days.



OF THE YELLOWS, WHITE WATER, LONGSUF, GOR-
GEL IN THE ELDER, COWS THAT GIVE BAD MILK,
&c.

THIS disorder is called by many names, therefore it would be lost labour to attempt to give all or every sign, and it is impossible to convince mankind of their ill-grounded notions. I shall therefore just make some observations on this disease, and add those reme-

edics which will infallibly answer their intended purposes, if properly applied.

In order to make any considerable progress in any science, it is necessary to begin with the first elements thereof: we must first endeavour to comprehend that which is most simple, and afterwards that which is more complex; therefore, in examining the nature of these diseases which are commonly called by the aforesaid names, it will be proper first to consider the most simple of that class.

Suppose, then, a beast in perfect health, engaged in violent exercises, such as fast driving, &c. so as greatly to increase the velocity, friction, and heat of the blood, which, when it is considerably so, is called a febrile state. This then is the most simple disease, arising from nothing but the increased action of the solids on the fluids, and the re-action of the latter on the former. When a beast is in this warm state, the pores of its skin are relaxed, and very susceptible of cold by a too hasty cooling; the consequence of which is often a suppression of natural evacuation, the coat contracts and loses its natural colour, and the hide becomes hard and stiff: the cuticular glands are deprived of their fluids, which are therefore confined in the more internal parts, and the disease is properly called obstructed perspiration.

Perspiration is always obstructed, when the pores of the skin are so contracted as not to allow discharge to the common materia perspirabilis, or when the circulation is so languid

that it will not throw off the requisite quantity through the pores.

The matter of insensible perspiration is mild; that of provoked or accelerated perspiration, commonly called sweat, resembles urine, is oily, fœtid, and yields a volatile salt; sweat is the watery part of what is drank, impregnated with salt, it is produced by changing or destroying the balance between the fluids and solids; and it must be acknowledged, that health subsists by a just balance between the solids and fluids; the resistance of the former being sufficient to continue the motion of the latter; therefore sweat is produced by relaxing or opening the pores of the skin, by diluting the fluids, by dissolving the blood, and accelerating its motion: so that whatever diminishes sweating or sensible perspiration too suddenly, may bring on an obstructed perspiration.

Insensible perspiration is the last and most perfect action of animal digestion, the keeping it up in due measure, is the cause as well as the true sign of good health, and a derivation from that due quality is a certain forerunner of a disease; therefore the best indication of health, or the want of it, is the measure of perspiration, for the obstruction of perspiration is the cause of numberless diseases.

I shall therefore point out to you in as plain a manner as possible, the symptoms of this disease.

The beast will rise up with great difficulty, walk very stiff, and seem sore on the back when

pinched ; it affects the knees, joints, hocks, &c. so that the beast can scarce creep along, for it cannot be called walking. This may be called the joint yellows, for every joint of the beast is full of a yellow liquor resembling glue : this causeth stiffness, lameness and great pain. It also affects the milk, so that one pap or more will give bad milk, and if it is not milked out frequently, it will bring on an inflammation in the udder, and putrify the kernels.

The beast appearing sometimes very hot, at other times cold ; very often shivering fits resembling an ague fit. The muscles contract and work in many parts of the body, particularly about the flank ; the pulses beat very strong, and the lungs in great motion. This may be called the fever of the yellows.

Do not give any hot stimulating medicines, as they are more prejudicial to the beast affected with this malady than serviceable ; except at the beginning of the disease, and while the shivering fit is on. Very few will die of this complaint, unless by giving improperly hot medicines and repeating them. Many a good beast has been destroyed through that to my knowledge.

In the first place, bleed freely according to the strength of the beast, then give the following :

TAKE Nitre, in powder, three ounces,
Salt of tartar, one ounce,
Castile soap, one ounce,
Epsom salts, four ounces,

Rhubarb, in powder, half an ounce,
 Bayberries, in powder, two ounces,
 Turmeric, in powder, two ounces.

Mix these together for two doses, one to be given in a quart of warm whey or gruel, and repeated every twenty-four hours. The beast should fast as before-mentioned.

The bleeding must be repeated according to the violence of the disease.

Or give the following ;

TAKE Flowers of sulphur, two ounces,
 Epsom salts, three ounces,
 Nitre, in powder, three ounces,
 Diaphoretic antimony, one ounce,
 Diapente powder, two ounces,
 Turmeric powder, one ounce.

Mix these together for two doses, and give them as above.

Or this medicine :

TAKE Virginian snake root, in powder, one ounce,
 Castile soap, two ounces,
 Valerian, in powder, three ounces,
 Jalap, in powder, half an ounce,
 Gentian, in powder, one ounce,
 Diapente powder, two ounces.

Mix these together for two doses, to be given the same as the other.

These medicines will relax the vessels, and procure a regular discharge, or secretion of perspirables. They infallibly incide and remove heavy slime and putrid matter sticking in the folds and villa of the ventricles, polluting

and loading them ; imbubes the feeble and flacid fibres : they corroborate, refresh, and encourage the spirits to flow in a plentiful manner ; they repair the tone of the stomach, restore its natural heat, recal lost appetite, and open the obstructed glands.

TREATMENT.

If the beast is so ill as to refuse its food, which often happens ; keep it up and give it plenty of water gruel, scalded malt-dust, fresh grains, or scalded bran. Good mashies of this kind greatly help to forward a cure.

AN EXCELLENT OINTMENT FOR A COW'S ELDER WHICH IS SWELLED OR INFLAMED.

TAKE Fox-glove blows, get them when they are dry, pound them in a mortar all to a salve, then get whey butter, twice the weight of the above, and pound them all together. To every pound of the above, add sal ammoniac powder and oil of turpentine, one ounce of each, and half an ounce of bole armenic in powder.

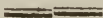
Mix all together for use. The elder to be rubbed well with this ointment two or three times a day ; and great pains must be taken to milk the affected milk out of the udder every time the ointment is used.

Or this ointment :

TAKE half a pound of goose oil or liquor, and half a pint of cold spring water, put them together in an earthen pot or cup, and beat them with a spoon until they incorporate and become a white paste, then rub well the inflamed part of the udder twice or three times a day. Observe to milk the affected quarter every time.

If the udder keeps hard, black and cold, you must expect a suppurating, or putrifying state is near at hand : then the following fomentation should be used.

TAKE Chick-weed, groundsil, and plaintain, of each a large handful, boil them in a gallon of whey. The affected part to be fomented with a piece of flannel, as hot as a person's hand can bear it, every three hours. If it tends to a suppuration, let out the matter when ripe, and dress it with some mild digestive salve, such as basilicon, &c.



OF THE JOINT YELLOWS, OR, TAIL ROT.

THIS disorder is much the same as the white water, but the beast is in a more impoverish-ed state.

It in general happens to cows that live on bad food, straw, &c. in the winter, the food being so bad and the nourishment so little to the beast, that the perspiration must in consequence be very small. The beast creeps and droops about by herself; feeds very sparingly, gets thinner and weaker every day, the skin

contracts and soon becomes very stiff, her coat stands an end, particularly about the shoulders and neck, a large quantity of yellow scurf will be found in the coat; and by examining her mouth, you will find the teeth loose, and the tail will be found weak and the joints very loose. This disorder being a more lingering one than almost any other, it ought to be particularly attended to in the first stage; but it is in general neglected so long, that the constitution of the beast is nearly destroyed before any remedy is applied.

In the first place bleed in proportion to the strength of the beast. Then give the following medicine:

TAKE Grains of paradise, in powder, two ounces,
 Salt of tartar, two ounces,
 Castile soap, three ounces,
 Saffron, two drachms,
 Turmeric powder, two ounces,
 Gentian powder, two ounces.

Mix these together for two doses; one to be given in a quart of warm ale, and repeated every twelve hours.

This medicine enriches poor watery blood, corrects crude juices, frees the liver from obstructions, inspires the mass of blood with a fresh and mild ferment, cleanses the bilious passages, and lubricates the intestines. It infallibly dissolves tough clammy phlegm where-soever it sticks, and depurates the fluids, penetrating into the glands and the smallest passa-

ges; piercing through obstructions, and sheathing the acrimonious particles of the bile.

ANOTHER MEDICINE.

TAKE Flowers of sulphur, half an ounce,
 Salts, one ounce,
 Nitre, one ounce,
 Grains of paradise, half an ounce,
 Diapente, half an ounce,
 Turmeric, half an ounce.

Mix these together for one dose, to be given in a quart of warm ale; and repeated every ten or twelve hours.

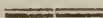
Or give this medicine :

TAKE Flowers of sulphur, four ounces,
 Diaphoretic antimony, one ounce.

Mix these together and give it in a quart of warm urine. When it is necessary to give this, it must be repeated every other day only.

TREATMENT.

Let the beast be kept on good hay, oats, &c. and other nourishing food.



OF THE BLACK WATER.

THE cause of this disease may be any thing that constringes the external habit, either con-

stipating or lubricating the fluids beyond their due tone, forcing an insurrection upon the vessels, so as to rupture them : or a great scarcity of water, or bad waters, such as ponds, &c. may give rise to this disease ; or a sudden change of weather, from hot to cold, will almost certainly bring it on ; for it locks up the whole external habit, makes the skin dry and corrugated, shutting up the pores, and suppressing perspiration ; at least only suffering the thinner parts of the humours to fly off ; then the whole mass of blood is forced into the larger vessels, hence it becomes elastic or immediately bursts open the vessels and evacuates itself along with the urine. When the disease is far gone, it will drop into the udder and discolour the milk.

Fresh pastures are subject to give this disease, and some land more than others, especially to cattle which are brought from different climates. It is supposed some vegetable will occasion it, which the cattle pick up in their food, and is, in a great measure, very pernicious to their health. It is most prevalent upon cold wet land, increased by sulphurs, &c. which arise in the night.

TAKE Dragon's blood, in powder, two ounces,
 Nitre, in powder, three ounces,
 Roch alum, in powder, two ounces,
 Bole armenic, one ounce,
 Rhubarb, in powder, half an ounce,
 Red sanders, one ounce.

Mix these together for two doses, one to be given in a quart of butter-milk, and repeated every twelve hours. The beast must fast as before-mentioned, and be sure not to bleed in this case.

Sometimes a violent straining comes on, this seldom happens till the beast has been affected two or three days; in that case give the following clyster :

TAKE Three quarts of thin gruel,
Sweet oil, six ounces,
Common salt, one pound.

Mix these together and inject it up the rectum milk warm.

ANOTHER MEDICINE.

TAKE Nitre, in powder, six ounces,
Prepared steel, one ounce,
Red sanders, two ounces,
Bole powder, two ounces.

Mix these for two doses, to be given in a quart of butter-milk, and repeated every twelve hours.



AN OPENING DRINK TO BE GIVEN AFTER THE WATER GETS BETTER.

TAKE Epsom salts, three ounces,
Nitre, in powder, two ounces,

Cream of tartar, two ounces,
Liquorice powder, two ounces.

Mix these for two doses, one to be given in a quart of warm whey or thin gruel, and repeated as occasion may require.

This medicine moderates the acrid, incrasates the thin and cools the hot boiling blood; it strengthens and corrugates the fibres, and closes up the mouth of the ruptured vessels; it allays extreme thirst, obtunds the acrimony of humours, thickens the too thin serum: and is a well suited medicine in hot constitutions; it opens obstructions, and promotes a regular discharge, puts an effectual stop to disorders arising from relaxed diseased vessels, allays their irritation, and restores their due tone.

Or this:

TAKE Bole armenic, two ounces,
Red sanders, one ounce,
Wood soot, one ounce.

Then take one handful of herbs, of crane's bill, pounded well and soaked a few hours in three pints of butter-milk, strain out the herbs, and add to it two ounces of spirits of turpentine, and give it the beast.

AN EXCELLENT MEDICINE, TO BE GIVEN WHEN OTHER MEDICINES HAVE FAILED, AND WHICH GIVES A TURN TO THE DISORDER IN GENERAL IN ABOUT TWENTY-FOUR HOURS.

TAKE Dragon's blood, one ounce,
Bole armenic, one ounce.

Mix these together, to be given in a pint of the best French brandy.

In two hours after administering the above medicine, give one ounce of sweet nitre, in a quart of skimmed milk or thin gruel.

TREATMENT.

The beast will be better out of the building unless the weather be very wet, cold or hot, then an open shade will be most proper. Give it milk-porridge often if it refuse its food.

A short enumeration of several other receipts, which are made use of by many people as remedies for this disease, is as follows: but if any benefit be gained by them, it must be at the first rise of the disease, by checking the stomach, or a change of food or habit; as those applications cannot be of any service when the relaxed state of the beast is arrived to an astringent one, or an inflammation has taken place.

Hog's dung, turpentine, and butter-milk,
Ditto, red dock root, pounded and boiled in water
and salt.

Hog's dung, nettle roots, pounded and boiled in the
 blacksmith's cooling trough water,
 Ditto, red sanders and milk only,
 Ditto, sulphur and diapente,
 Ditto, spring water and common salt,
 Ditto, rennet, anvil slack, and butter milk,
 Ditto, shepherd's pouch, red robin, &c.

Some persons have dressed the urine of the beast by catching a small quantity, keeping it in a vessel, and putting one penny worth of blue vitriol into it, and as that clears, they are weak enough to imagine it will effect a cure, which is too ridiculous for any person to attempt to practise.

For instance, I have known cattle kept sometimes upon high, and at other times upon low land; and the owner has discovered a beast affected with this disease, when it has been upon low wet land. He then removed the beast to high land, where there was a brisker circulation of air; whence the beast has sometimes recovered without giving any medicine. But this is a case that very seldom happens.

OF THE DISORDER CALLED THE BLAIN.

THE beast is generally affected with this disease in the beginning of the summer, particularly in gleamy weather.

It is seized very suddenly with a swelling at the nose, pants and breathes very quick; the

eyes are swelled and inflamed, with water gushing therefrom continually, large blisters arising at the root of the tongue: and if not relieved immediately, the beast will swell very much, and blisters will appear very large at the fundament, also the shape and fundament will appear swelled and of a liver colour.

In the first place, break the blisters in the mouth and throat with your hand, then bleed plentifully, and give the beast a pint of the blood with one handful of salt in it. The beast should likewise be raked backwards, in order to break the blisters and bring the dung out of the strait gut, then give the following medicine :

TAKE Epsom salts, four ounces,
 Aniseed powder, two ounces,
 Gentian powder, two ounces,
 Powder jalap, half an ounce.

Mix these together for one dose, to be given in a quart of ale milk warm. The beast should walk about for an hour after the draught is given.

This medicine is cooling and laxative, works its passage through the bowels, cools the blood, opens obstructions, extinguishes the inflammatory lentor, depurates the coagulated humours, and finally obtunds the malignity, and acrimonious disposition and rage thereof.

TREATMENT.

Give the beast warm water for two or three days and bran mashes, to work off the medicine.

ANOTHER FOR A WEAK OR SMALL BEAST.

TAKE Epsom salts, two ounces,
 Aniseed powder, one ounce,
 Gentian powder, one ounce,
 Salt of wormwood, half an ounce.

Mix these for one dose, to be given in a quart of ale milk warm.

Treatment as before mention'd ; and by no means omit bleeding at the beginning of the disease, as in this case it is peculiarly requisite.

OF A SLIMY FLUX, OR LOOSENESS, COMMONLY CALLED A SCOURING COW.

THE symptoms of this disorder, are a frequent and liquid injection of the intestines, caused by an irritation therein ; the excrements are slimy, bilious or black, sometimes they are limpid and fluid, like water cast out : at other times, they are frothy, greasy, and mixed with a fat clayish substance. This disorder is generally attended with a bad appetite, a weak depressed pulse, harsh dry skin, dull counte-

nance, and sometimes a slow fever. This disease is so obvious that it needs no further description, for the copious evacuation of the excrements, and many other signs, make it evident to the knowledge of every person.

To dwell long on this disease, will be giving too much trouble to my readers, or else half a volume might be written upon it. I shall only observe, that the first stage of it is a companion of the *joint yellows*, and may be traced out to the satisfaction of any one who will take the trouble to open an animal that dies of this disorder. I have opened many in the different stages of it, for my own satisfaction. There will always be found grumes lodged in the stomach or round the digester, and down the passages from that through the intestines, which is of a strong sizzly substance, when it arrives to be fatal to the beast.

TAKE Mutton suet, one pound,
Oil of turpentine, four ounces.

Boil these together in three quarts of milk, till the suet is dissolved, and give it at night milk warm, and the next morning give the following medicine :

TAKE Pomegranate powder, eight ounces,
Logwood, in powder, two ounces,
New pipes, pounded, two ounces,
Peruvian bark, in powder, two ounces,
Roch alum, in powder, six ounces.

Mix these together, to be given in two quarts of old ale or urine, and repeated every other day. The beast should fast two hours before and two after taking the medicine.

This medicine comforts the ventricles and intestines, restores the tone of the bowels, and bridles their disorderly peristaltic motion: there is in all loosenesses a sharp or slimy matter sticking to and irritating the coats of the intestines exciting them to excessive and preternatural evacuations.

TREATMENT.

After giving two or three of the above medicines, and the cow begins to dung in a more regular manner, then it will be proper to take one pint of crab verjuice, one handful of herb grass cut fine or small, and boiled in the verjuice, let it stand till it is milk warm, then give it to the beast. This dose to be repeated nine or ten mornings together, it will greatly strengthen the stomach, increase the appetite, and destroy the bile that overflows in the stomach at all times in this disease.

ANOTHER MEDICINE.

TAKE Calcined oyster-shells, in powder, four ounces.

Ditto pipe clay, one ounce,
Oak bark powder, two ounces,
Grains of paradise, one ounce,
Roch alum, one ounce.

Mix these together for one dose, to be given in a quart of old beer and a pint of red wine, or in three pints of oak dip from the tan pits.

OF AN INFLAMMATION IN THE BOWELS, OR A VIOLENT FLUX.

THE beast is taken with violent pains, resembling the gripes, the eyes and inside of the mouth will appear much inflamed, it often lies down, and arises of a sudden, purges very much, the dung will appear of a darkish or coffee colour, with a very offensive smell, more so than a scouring cow; the dung also appears to have a kind of putrified skin or flesh intermixed with it, the pulse is low, and the cow will appear very cold outwardly: this disorder is commonly called the plague in the guts.

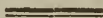
TAKE Pomegranate powder, three ounces.
 Rhubarb, in powder, one ounce,
 Diascordium, one ounce,
 Alum, in powder, two ounces,
 Grains of paradise, in powder, one ounce,
 Aniseed powder, two ounces.

Mix these together for two doses, give the beast one of them mixed in a pint of red wine and one pint of good ale, milk warm; and repeat it every ten or twelve hours, or as occasion may require.

The rhubarb in this composition is serviceable, for it carries off the hostile matter and braces the relaxed fibres, restoring them to their due tone. The diascordium has its share in accomplishing the cure, by its astringency, rendering the vessels insensible to the pungency of morbid particles. In short, this composition is furnished in all points, where astringency is required to repress it.

TREATMENT.

Keep the beast warm, and give it two or three quarts of rice milk twice a day; and at different times give it one ounce of nitre, dissolved in about a gallon of warm water. Mash made of malt, bran, or scalded oats, will be proper food as soon as it will eat.



OF AN INFLAMMATION IN THE BOWELS FROM COSTIVENESS.

THE beast lies down very much, and arises with great difficulty, appears very full though it eats little or nothing; the eyes appear dull and heavy, the pulse strong and full, the external appearance of the body seems to handle or look in its natural state.

In the first place, bleed according to the strength or size of the beast; then give the following medicine:

TAKE Epsom salts, four ounces,
 Cream of tartar, four ounces,
 Jalap, in powder, half an ounce,
 Aniseed powder, two ounces.

Mix these together, to be given in a quart of decoction of sena, with half a pint of linseed oil in it.

THE DECOCTION OF SENA, IS MADE AS
 FOLLOWS :

TAKE Sena, two ounces, water three pints, boil it to a quart, then strain off the decoction.

The beast should be raked backwards, in order to bring the dung out of the straight gut, and if the beast does not dung in five or six hours after it has had the above medicine, give it the following clyster.

THE CLYSTER.

TAKE Three quarts of thin gruel,
 Six ounces of sweet oil,
 One pound of common salt,
 Liquid of laudanum, one ounce.

Mix these, and inject it up the rectum, milk warm. The medicine and the clyster to be repeated as occasion may require.

This clyster along with the medicine, gives assistance in horrid torturing pains of the bowels, and stubborn spasmodic costiveness ; it in-

vigorates the membranes of the guts, relaxes corrugations of the fibres, expels wind, softens the excrements, and empties the intestines.

TREATMENT.

Give the beast plenty of water gruel, to help the operation of the medicine and likewise for nourishment.



OF AN INFLAMMATION IN THE LIVER.

THE common symptoms of this distemper, are a difficulty of breathing; a preternatural swelling about the short ribs, an intermitting pulse, a perpetual load in the belly, because the liver is stuffed with blood, retained by the inflammation hindering its circulation.

Inflammations in the liver are always full of danger, commonly ending in dropsies, or decay of the body, to prevent which requires good management; but that which invades the lower parts of the liver only, is more dangerous than that which invades the external or superficial part.

In the first place, bleed, duly considering the bulk or size of the beast, then give the following medicine:

TAKE Castile soap, two ounces,
Cream of tartar, two ounces,

Rhubarb, in powder, half an ounce,
 Gentian, in powder, one ounce.
 Æthiop's mineral, one ounce.

Mix these together for one dose, to be given in a quart of thin gruel, and repeated every twenty-four hours.

Or this :

TAKE Castile soap, two ounces,
 Venice turpentine, two ounces,
 Jalap powder, half an ounce,
 Depurated nitre, one ounce,
 Turmeric, in powder, one ounce.

Mix these for one dose, to be given as before-mentioned, and repeated every twenty-four hours, or as occasion may require.

These medicines penetrate and open the obstructed passages in the liver, and evacuate the grumous concretions therein: consequently they are applicable to inflammations in the liver.

TREATMENT.

Give every sort of food that is nourishing and strengthening, for in this disease the beast is in general very weak and low: warm water should be given as often as it will drink.

OF AN INFLAMMATION IN THE KIDNEYS.

THE kidneys are subject to inflammation as much as any other internal part of the body.

The common symptoms of this disease, are a deficiency of urine, sometimes attended with a shivering and sharp pain in the region of the kidneys, a low pulse, and somewhat feverish; the external part sometimes very cold, at other times of a preternatural heat. If the urine comes away in small quantities, and high coloured, without the beast making any sensible motion in order to part with it, you may conclude there is an insensibility in the parts; these are the true symptoms of an inflammation in the kidneys.

Bleeding in a proper degree and well timed, will be of great service to assuage the inflammation.

Then give the following medicine :

TAKE Nitre, in powder, two ounces,
Castile soap, two ounces,
Cream of tartar, two ounces.

Mix these together for one dose, to be given in a quart of gruel, with one ounce of oil of juniper added to it. This dose should be repeated every twenty-four hours.

This medicine cleanses the reins and ureters, expels gravel and sand, and prevents the breeding of the stone, or the lodgments of any filth.

It penetrates and opens the clogginess of the kidneys, evacuates their superfluous contents, and revives the drooping spirits.

TREATMENT.

Give the beast a quart of pellitory tea two or three times a day, and any sort of food it will eat or drink, so as it is of a diluting kind.



FOR A COUGH, OR A DISEASE IN THE LUNGS; WHEN OF LONG STANDING, COMMONLY CALLED THE HOOSE.

TAKE Vinegar of squills, one ounce,
Balsam of capivi, one ounce,
Balsam of sulphur, two ounces,
Honey, four ounces.

Mix these for one dose in a quart of pennyroyal tea, and give it the beast fasting two hours before the dose and two hours after. The dose to be repeated every third day.

Or this :

TAKE Elecampane, two ounces,
Salt of wormwood, one ounce,
Liquorice powder, one ounce,
Sweet spirits of nitre, one ounce,
Æthiop's mineral, half an ounce.

Mix these as before, and repeat it every twenty-four hours.

This is a powerful and very commodious medicine for the lungs, it destroys the ill habit thereof, and evacuates the offending humours from the pulmonic vessels, it warms, comforts, eases, and reduces them to a state of soundness, it is likewise a good diuretic; it will greatly rouse the spirits when depressed by insensible perspiration.

The beast should be kept in the house while taking these medicines, unless the weather is particularly fine and the grass dry; avoid giving it cold water.



FOR CONVULSIONS FROM COLD WINDS OR FLATULENCY.

THIS is a disorder which is caused from cold winds, &c. or by bad digestion, the wind draws into the beast backwards, soon returns back with a great noise, the beast is also attacked with a violent straining, and a raging pain, the belly seems puffed up with wind, it rumbleth about for a short time, and then breaks away.

In the first place, take two quarts of blood from the beast, then give the following medicine, fasting two hours before and two hours afterwards.

TAKE Caraway seeds, one ounce,
Grains of paradise, one ounce;
Aniseeds, one ounce,
Diapente, one ounce,

Rhubarb, half an ounce,
Opium, in powder, half a drachm.

Mix this for one dose, to be given in a quart of warm ale, and repeated every twenty-four hours.

This medicine inspires the mass of blood with a fresh and mild ferment, expels wind, and subdues the most raging pains, it procures activity to the sluggish and irritating fluids, so as to hinder them from rushing through its channels; it stands in need of no recommendation, its efficacy being such as will bear the strictest trial.

FOR THE JOINT EVIL.

THIS is a distemper which is caused by foul blood, a bad habit of body, &c.

The beast is taken with a stiffness in the joints, small tumours or knobs will appear on the joints and legs, and turn into very foul and ill disposed ulcers, resembling the farcy in horses.

TAKE Gum Guaiacum, in powder, one ounce,
Æthiop's mineral, one ounce,
Grains of paradise, in powder, two ounces,
Aniseed powder, two ounces,
Diapente powder, two ounces.

Mix these for one dose, to be given in a quart of warm ale; repeat the dose every other day, or as occasion may require.

This medicine opens obstructions, invigorates the fluids, and moves the circulation till the disease is thrown off by secretion.

FOR LOOSING THE CURD, OR THROWING IT UP.

THE cause of this disorder is from a too relaxed state of the stomach, or too large a quantity of bile lodged thereon, the beast becomes very thin, for as soon as it has eat a little food it appears very ill, and soon throws it up again, with a great quantity of ropy slime intermixed with it.

TAKE Verjuice, one pint,
Oil of vitriol, half an ounce.

Mix these together, and give the beast one hornful, two, three or four times a day, till the food stays on the stomach, then give the following medicine:

TAKE Gentian, in powder, two ounces,
Grains of paradise, one ounce,
Rhubarb, in powder, half an ounce,
Aniseed powder, two ounces.

Mix these for one dose, to be given in a quart of warm ale, and repeated as occasion may require.

OF THE RED WATER.

THE beast will make bloody water, of a fine purple colour, which will appear for a

few days, then the beast will make clear water again, and in the course of a day or two it will return to its purple colour again: the cause of this disorder is from weak relaxed vessels, thin blood, &c. or the blood vessels being overloaded with blood, from which the urinary vessels become blood vessels, and the blood comes away with the urine.

Then give the following medicine :

TAKE Dragon's blood, in powder, two ounces,
 Prepared steel, one ounce,
 Nitre, in powder, three ounces,
 Diapente, in powder, three ounces.

Mix for two doses, one to be given in a quart of good ale, with two ounces of oil of turpentine in it, and repeat the dose as occasion may require.

This medicine opens obstructions, and promotes a requisite discharge, it puts an effectual stop to disorders arising from relaxed vessels, allays their irritation, and helps to restore their due tone.



OF THE MILK FEVER, OR DROPPING AFTER CALVING.

THIS disorder is frequently occasioned by catching cold, especially the receiving cold air at the mouth of the uterine vessels; sometimes it is occasioned by the beast drinking too large a quantity of cold water while the blood is in

a strong fermentation: nearly all or most of these symptoms are occasioned by cold, and are attended with convulsive fits, and a retention of natural evacuations, which may be properly denominated a puerperal fever.

The danger of the disease, and difficulty of cure, are generally to be estimated by the degree of the symptoms.

The common signs of this disorder are as follows, an inability to stand, stretching out the legs, violent convulsions, cold extremities, an intermitting pulse, little or nothing evacuated from the calf bag, with many other obvious symptoms.

In cases so evidently dangerous speedy remedies must be applied, or the attempt to cure will be to little or no purpose.

Give the following medicine :

TAKE Nitre, in powder, two ounces, oil of vitriol, one tea-spoonful, rub the nitre and oil of vitriol together in an iron or marble mortar, then add, valerian, in powder, one ounce and a half, Virginian snake-root, in powder, one ounce.

Mix these for one dose, to be given in a quart of the following decoction, with half a pound of treacle in it, and repeat it every twelve hours.

THE DECOCTION.

TAKE A good handful of feverfew,
Balm, two handfals,
Cammomile flowers, two ounces.

Boil these in one gallon of water for half an hour, and let the herbs remain in the decoction.

A pint of this decoction sweetened with treacle, to be given the beast every two hours between each medicine, until she can rise and stand tolerably well herself.

This medicine gives strength to the blood when its compages are too lax and soluble, it conglutinates ruptured vessels, and is of singular benefit against immoderate fluxes, such as preternatural discharges.

The beast is generally seized with the disorder the first week after calving, about the third day ; some are taken immediately after calving : it most frequently happens to cows in high condition, for very few poor lean cows are affected with it.

TREATMENT.

In this disorder the beast must be kept warm, with suitable covering, raked about twice a day, and as little disturbed as possible : when she is laid down, the fore parts should be considerably elevated, in order to favour evacuations. It will be needless to offer it any food, for it cannot eat while in this state.

Many will drop down, but few if any can rise again, without the help of this medicine. The beast should be attended night and day, as it will have restless fits and probably beat off the horns if left alone : it will often rise upon the knees in attempting to get upon its legs, and

fall again in a position not proper to lie in. If the beast lies any considerable time with its back lowest, it will soon swell and die ; he person who waits upon it, must be careful to keep it in a right posture as before described, with the head and shoulders much higher than the other part.

FOR AN INFLAMMATION IN THE SHAPE, OR URINARY PASSAGES.

THE beast goes frisking her hind parts about in the hedges, her shape soon becomes swelled and inflamed, there will boils arise on the shape, which will break and run very much ; this is caused by too great heat in the blood and urine. This disorder commonly makes its appearance in very hot weather, and sometimes after bulling.

In the first place, bleed freely, then give the following medicine :

TAKE Nitre, in powder, two ounces,
 Cream of tartar, three ounces,
 Castile soap, one ounce,
 Aniseed powder, one ounce.

Mix these for one dose, to be given in a quart of warm whey, and repeated as occasion may require.

This medicine is cooling and laxative, it refrigerates the heat in the blood, and subdues acri-

mony by evacuating the humours; it also deterges the urinary pipes, and moves urine very powerfully.

THE OINTMENT.

TAKE Half a pound of goose oil,
Bole armenic, four ounces,
Calcined alum, one ounce.

Mix these together, and with a stick and rag wrapped round it, rub a little up the inside, and also the outside of the shape, twice a day, for several days.



FOR A COW THAT IS FARDEL BOUND.

WHEN a beast is fardel bound, it appears fuller than usual, and although it eats but little food, it dungs very often, but a small quantity at a time; in a little time it becomes to dung very thin, much like a scouring cow, but less at a time; in this case the fresh food has found a narrow passage through the hard dung which is lodged in the bowels, but still this hard dung remains in its place: in the first place apply the following clyster.

THE CLYSTER.

TAKE Four quarts of whey or thin gruel,
Glauber salts, six ounces,
Common salt, one pound.

Dissolve these in the whey or gruel, then add four ounces of sweet oil; inject it milk warm.

Then give the following medicine :

TAKE Nitre, in powder, three ounces,
Epsom salts, three ounces,
Castile soap, two ounces,
Aniseed powder, two ounces,
Jalap powder, half an ounce.

Mix these for two doses, one to be given in a quart of new milk, with four ounces of goose oil in it, and repeat it every twelve hours, or as occasion may require.

This medicine, with the clyster, is of great service by appeasing the spirits, comforting the weak fibres, attenuating heavy phlegm, correcting the intestinal glands; it softens the hard dung, and empties the intestines.

The beast may keep to its usual food, only observe to give warm water while the medicines are operating; no astringent medicines should be given in this case: I have known many cows entirely lost by giving binding medicines.



FOR THE PLAGUE IN THE GUTS.

THE beast is taken with violent pains in the bowels, appears very restless, lies down, then gets up of a sudden, with violent twinging

pains, much resembling a horse affected with the gripes, the wind rumbleth in its bowels, and it is taken with a violent purging.

TAKE Venice treacle, two ounces,
 Aniseed powder, one ounce,
 Diapente powder, one ounce,
 Mader powder, one ounce,
 Grains of paradise, in powder, half an ounce.

Mix these for one dose, to be given in a quart of warm ale, and repeated every twenty-four hours; let the beast fast as before-mentioned.

This medicine comforts the ventricles and intestines, restores the tone of the bowels, and bridles their peristaltic motion.

TREATMENT.

Keep the beast with dry food, and give it warm water to drink until it gets well.



FOR A NERVOUS DISORDER.

THE beast is seized with a trembling, appears very weak and low; a little exercise soon overpowers it, the pulse is weak and small, with great lassitude and weariness.

TAKE Valerian, in powder, two ounces,
 Snake root, in powder, one ounce,

Diapente powder, one ounce,
Gentian powder, one ounce.

Mix these for one dose, to be given in a quart of warm ale, with one ounce of tincture of assa-fœtida in it, and repeat the dose every third day.

This medicine attenuates and invigorates the fluids, opens the obstructed nerves, and drives out the disease by force.

TREATMENT.

Feed the beast upon good hay, bran, and oats, and give it warm water to drink.



FOR A COW OF A BAD SURFEIT, OR BREAKING OUT.

This is caused by a bad habit of body, foul blood, gross humours, &c.

In the first place bleed, then give the following medicine:

TAKE Epsom salts, two ounces.

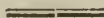
Common antimony, in powder, one ounce,
Flour of brimstone, one ounce,
Grains of paradise, in powder, half an ounce,
Gentian powder, one ounce.

Mix these for one dose, to be given in a quart of warm ale, and repeat the dose every other day.

Let the beast fast two hours before and two hours after taking the medicine.

OUTWARD APPLICATION.

Take strong lees as hot as you can bear your hand in, and bathe well with a woollen rag the affected parts where the hair is off, and where the moisture appears; by that means it will cleanse the pores of the skin from the poisonous matter which is already broke out.



FOR A BULL WHICH IS OVERHEATED BY RIDING.

THIS causeth inflammation and swelling in the yard, so that it will not return into its sheath again; the following ointment should be used:

TAKE White vitriol, in powder, one drachm,
Sugar of lead, two drachms.

Mix them with four ounces of goose oil, and apply a little of this ointment on the yard and swelling, two or three times a day, then give the following medicine:

TAKE Gum guaiacum, in powder, one ounce,
Madder powder, one ounce,
Diapente powder, one ounce,
Gentian powder, one ounce.

Mix these for one dose, to be given in a quart of warm ale, and repeat the dose every third day; the beast fasting as before-mentioned.

FOR A COW WHICH HAS LOST HER MILK OF A SUD-
DEN.

THIS is caused by cold or a bad habit of body, or the vessels being too much loaded with blood.

In the first place bleed, and then give the following medicine:

TAKE Glauber salts, two ounces,
Flowers of sulphur, one ounce,
Diaphoretic antimony, one ounce,
Diapente powder, one ounce,
Turmeric powder, one ounce.

Mix these for one dose, to be given in a quart of warm ale; and repeat the dose as occasion may require.

The beast to fast two hours before and two after taking the medicine.

The above medicine may be given to any cow with a fresh cold.

FOR A COW WHICH HAS TAKEN A BAD COLD, AND
ALSO REFUSETH ITS FOOD.

GIVE the following medicine:

TAKE Grains of paradise, one ounce,
 Gentian, in powder, two ounces,
 Diaphoretic antimony, one ounce,
 Bay berries, in powder, one ounce.

Mix these for one dose, to be given in a quart of warm ale, with half a pound of treacle, and repeated as occasion may require.

This medicine brings on perspiration; it strengthens, refreshes, and encourages the spirits to flow in a plentiful manner; it repairs the tone of the stomach, restores its natural heat, recalls lost appetite, and opens the obstructed glands.

TREATMENT.

Keep the beast very warm and sheltered from wet weather, and give it comfortable mashes and warm water.



FOR A COW WHICH IS BRUISED INWARDLY BY PULL-
 ING THE CALF AWAY.

GIVE the following medicine :

TAKE Spermaceti, two ounces,
 Castile soap, one ounce,
 Irish slate, in powder, two ounces,
 Diapente powder, one ounce.

These to be mixed for one dose, and given in a quart of warm ale, and repeated in twenty-

four hours. Let the beast fast as before-mentioned.

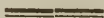
Or, give the undermentioned balls :

TAKE Venice turpentine, four ounces,
Spermaceti, half an ounce,
Irish slate, one ounce.

Mix these together with as much liquorice powder as will make it sufficient for balls, then divide it into half a dozen equal parts, and give three balls for one dose, morning and evening, with one quart of warm ale, and half an ounce of sweet spirits of nitre added to it, to wash them down.

TREATMENT.

The cow must be kept warm, and give it warm water and warm mashes.



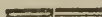
AN EXCELLENT CLEANSING DRINK FOR A COW AFTER CALVING.

TAKE Juniper berries, pounded, three ounces,
Birthwort powder, two ounces,
Fenugreek powder, one ounce,
Spermaceti, two ounces,
Flour of sulphur, one ounce,
Antimony powder, one ounce,
Saffron, half an ounce.

Mix these for two doses, one to be given to the beast in a quart of warm ale, and repeated every other day, till the cleansing comes away.

TREATMENT.

The beast must live on moist food all the time, such as scalded malt-dust, but no grains or scalded bran, give it warm water to drink, and fast as before-mentioned.



A THRIVING DRINK FOR A COW, OR A BEAST, WHEN IN A POOR WEAK UNKIND STATE.

TAKE Grains of paradise, in powder, one ounce,
Gentian powder, one ounce,
Snake root, in powder, half an ounce,
Diapente powder, one ounce,
Turmeric powder, half an ounce,
Aniseed powder, one ounce.

Mix these for one dose, to be given to the beast in a quart of warm ale, and repeated as occasion may require.

TREATMENT.

The best treatment for a beast in this situation, is to change the food as much for the better as possible.

FOR A COW THAT IS GORGED OR SWELLED, OR HAS
FED TOO FREE ON CLOVER OR ANY OTHER SORT
OF FOOD.

IN the first place, bleed freely, then give the
following medicine :

TAKE Epsom salts, two ounces,
Nitre, in powder, one ounce,
Liquorice powder, one ounce.

Mix these for one dose, to be given in a quart
of cammomile tea, with half a pint of cold
drawn linseed oil in it, or four ounces of goose
oil if the other is not to be had.

TREATMENT.

Drive the beast gently about for some time
in order to make it dung; and should it swell
so as it cannot stand, paunching will be ne-
cessary immediately, to save the life of the
animal.

PAUNCHING.

This operation must be performed on the
contrary side the beast is milked on, by pier-
cing a very sharp knife just in the centre be-
tween the first rib and the hip bone, about
three inches from the point of the short ribs,
making an orifice an inch long or more; there
cannot be any danger attending this operation,

and if the knife be even as long as a butcher's knife, it will not do an injury in that place, if you be careful to avoid getting against the bones.



FOR A COW THAT IS HURT IN THE DRIVING, AND APPEARS TO BE VERY SORE AND ILL, AND ALSO REFUSETH HER FOOD.

GIVE the following medicine :

TAKE Gentian, in powder, one ounce,
 Diapente, in powder, one ounce,
 Long pepper, in powder, half an ounce,
 Venice treacle, two ounces,
 Diaphoretic antimony, one ounce.

Mix these for one dose, to be given in a quart of warm ale, and repeat the dose as occasion may require.

TREATMENT.

This medicine will occasion sweating, therefore the beast must be kept in a warm cow-house, where a current of air cannot come, and care must be taken to let it cool moderately ; give it warm water for some time, and let it out a little while at a time when the weather is tolerably dry, till exposure to the air becomes habitual to the cow.

A DRINK TO DRY A COW.

THE following medicine may be given to any cow you wish to dry ; let her give little or much milk, it will be certain to answer the purpose.

TAKE Roch alum, in powder, four ounces,
Common alum, in powder, four ounces,
Dragon's blood, in powder, half an ounce,
Turmeric powder, one ounce.

Mix these for one dose, to be given in a pint of rennet water, and a pint of crab verjuice, or a quart of cold skimmed milk.

The beast should be bled freely, and be milked quite clean out of the elder ; there will be no necessity for milking it any more after the first time. If it should so happen as to be milked more than once as described before, it destroys the effect of the medicine, a second dose must therefore be given in the same manner as the first, with bleeding and milking at the time of giving it the drink, and though the udder appears full, yet it will gradually diminish without any injury to the beast.



A DRINK FOR MAKING A COW TAKE THE BULL.

TAKE Black hellebore root, pounded, one ounce,
Capsicum, in powder, half an ounce,

Round birthwort, in powder, one ounce,
 Bay berries, in powder, one ounce,
 Cantharides, in powder, half a drachm.

Mix these for one dose, to be given in a quart of warm ale, which will be sufficient for a large strong cow.

THE FOLLOWING FOR A LITTLE COW.

TAKE Black hellebore, powdered, half an ounce,
 Capsicum powder, two drachms,
 Birthwort, powdered, half an ounce,
 Bay berries, powdered, one ounce,
 Cantharides, one scruple.

Mix these for one dose, to be given in a quart of warm ale.

If the above drink should irritate too much, take one ounce of nitre dissolved in a quart of thin gruel, give it the beast, and it will take off that irritation or pain.

Little or no good will ever result from forcing cows to take the bull, but as many desire the medicine, I have added it with the rest, but do not recommend it in a general way.



FOR A COW OF THE FOUL IN THE FOOT.

THE beast appears very lame, and by examining the foot you will find a crack in it, with an offensive discharge proceeding from it.

In the first place, scrape it with a sharp knife, and clean it well, then dress it with a little butter of antimony once a day, keep the beast from going into the water, and a cure will be effected in a few days.

If it be the swelled foul, the beast will be in great pain, and the foot will be swelled very much, and the clees will stride out one from the other wider than usual, and if not attended to, it will break out near the fetlock joint; in this case use the following poultice :

TAKE Ragwort, and brooklime, of each two handfuls, pound them in a mortar down to a pulp, then add as much wheat flour as will make it of a proper consistence, then spread it on some linen cloth, apply it to the swelled foot, and repeat the dressing every day.

TO MAKE A CHARGE FOR A COW WHICH IS SLIPPED
IN THE HIP OR SHOULDER, &c.

TAKE Burgundy pitch, half an ounce,
Yellow rosin, four ounces,
Frankincense, four ounces,
Dragon's blood, in powder, one ounce,
Hog's lard, one ounce.

Melt these together over a gentle fire, and keep it by for use.

DIRECTIONS FOR USING THE CHARGE.

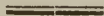
Make it boiling hot, and spread it well over the slipped joints, &c. put on as much short wool as will stick, and let it remain there till it wears off; observe to be quick in putting it on, or it will get too cold for the wool to adhere.

Sometimes strong oils will effect a cure without applying the above charge, to be made into the following ointment.

THE OINTMENT.

TAKE Oil of thyme, one ounce,
Spirits of sal ammoniac, one ounce,
Oil of turpentine, two ounces.

To be well mixed together, and rubbed on the part affected twice a day.



A WARMING MEDICINE FOR A COW THAT HAS TAKEN COLD, AND SHIVERS MUCH.

TAKE Grains of paradise, one ounce,
Ginger, half an ounce,
Gentian powder, two ounces,
Aniseed powder, one ounce.

Mix these together for one dose, to be given in a quart of good mild ale, and half a pound of treacle.

TREATMENT.

Keep the beast warm, and give it warm water to drink two or three times a day.

A MEDICINE FOR A COW HAVING A DRY HOOSE, OFTEN STRAINING, &c.

THIS is a slight inflammation on the lungs and kidneys occasioned by cold, which generally terminates in some bad disease, if not timely removed.

TAKE Vinegar of squills, half an ounce,
 Balsam of sulphur, one ounce,
 Elecampane, two ounces,
 Turmeric, half an ounce,
 Salt of tartar, half an ounce.

Mix these together in a quart of cammomile tea, and a quarter of a pint of cool drawn linseed oil, to be repeated every other day.

TREATMENT.

Keep the beast very warm, and avoid giving it cold water to drink.

A DRINK FOR A COW THAT APPEARS LAME IN THE JOINTS.

THE lameness of the cow appearing at one time in the fore quarters and at another in the hind quarters, attended with great pain; this often proceeds from hard driving, &c.

TAKE Gum guaiacum, in powder, one ounce, steep it in a glass of brandy all night, add to it one ounce of Æthiop's mineral, and two ounces of gentian.

Mix these together, and give it the beast fasting in the morning in a quart of good old ale, and repeat it every third day, as long as is necessary.



FOR A YOUNG CALF OF A COSTIVE HABIT.

TAKE Cream of tartar, one ounce,
Ginger, in powder, one ounce,
Rhubarb, in powder, one ounce,
Liquorice powder, one ounce.

Mix these for two doses, to be given in a pint of thin gruel or whey, and repeated as occasion may require: one of these doses is sufficient for a large strong calf.

This medicine purges kindly without griping or sickness, takes off the load from the intestines, and leaves them stronger than before, and

is an inveterate enemy to any thing lurking in the coats of the guts.

FOR A YOUNG CALF OF A PURGING HABIT.

TAKE Prepared chalk, two ounces,
 Pomegranate powder, one ounce,
 Alum, in powder, half an ounce,
 Ginger, in powder, half an ounce,
 Bole armenic, one ounce,
 Opium, half a drachm.

Mix these for one dose, to be given in a pint of warm ale, and repeat it as occasion may require.

This medicine comforts the ventricles and intestines, restores the tone of the bowels, and bridles their disorderly peristaltic motion.

FOR A YOUNG CALF OF THE MURRAIN, OR BLACK LEG.

TAKE Liver of antimony, in powder, half an ounce.
 Myrrh, in powder, half an ounce,
 Venice treacle, one ounce,
 Grains of paradise, in powder, half an ounce,
 Gentian powder, one ounce.

Mix these for one dose, to be given in a pint of rue tea, and repeat the dose as occasion may require.

This medicine opens obstructions, invigorates the fluids, and occasions circulation, till the morbid matter is thrown off by secretion.

FOR A YOUNG CALF OF AN INFLAMMATION IN THE
HEAD.

THE symptoms are a dull countenance, the external parts cold, with a great discharge of slime and matter from the nostrils.

This disease is caused by cold and phlegmatic humours affecting the brain.

Bleeding is requisite according to the strength of the calf, then give the following medicine :

TAKE Snake root, in powder, two drachms,
Valerian, in powder, half an ounce,
Venice treacle, one ounce,
Diaphoretic antimony, half an ounce.

Mix these for one dose, to be given in a pint of gruel, and repeat the dose every eight or ten hours, as occasion may require.

This medicine attenuates the juices, breaks the cohesion of their parts, destroys their viscosity, and makes them sufficiently thin, and fit to flow in the small vessels with ease.

FOR A YOUNG CALF OF A FRENZY.

THE signs of this disorder, are a wild florid countenance, a strong pulse, with all the symptoms of melancholy.

This is a disease of the brain, and requires bleeding in a free manner, according to the strength of the calf; then give the following medicine :

TAKE Cream of tartar, two ounces,
Nitre in powder, half an ounce,
Jalap, and Rhubarb, in powder, of each, one
drachm.

Mix these for one dose, to be given in a pint of thin gruel or whey, and repeat the dose as occasion may require.

This medicine being cooling and laxative, refrigerates the blood, subdues its acrimony, by evacuating the morbid matter, and draws the blood from the head into the larger vessels.

FOR A YOUNG CALF OF THE TURN IN THE HEAD.

IN this disease the animal imagines visible objects to turn round.

Bleeding is here necessary, according to the strength and size of the calf: then give the following medicine :

TAKE Valerian, in powder, half an ounce,
Birthwort, in powder, one ounce,
Camphire, one drachm,
Nitre, in powder, one ounce,

Mix these for one dose, to be given in a pint of rosemary tea, and repeat the dose as occasion requires.

This medicine invigorates the fluids, opens the obstructed nerves, and drives out the disease by force.

RECEIPTS

FOR CURING

THE GRIPEs, STAGGERS, AND WORMS, IN HORSES.

FOR THE GRIPEs IN A HORSE.

THERE is scarce any distemper more usual among horses than the gripes, and some horses are more subject to it than others, particularly those addicted to crib-biting, who by sucking in the air, often fill their stomach and guts to such a degree with wind, that they swell prodigiously, and look as if they were ready to burst, till some means are used to give them vent.

The symptoms are, often lying down, and rising suddenly with a spring, occasioned by the violence of the pain; a horse in this condition rolls about, and often tumbles on his back, these symptoms generally proceed from a stranguary or stoppage of urine, which stop-

page almost always attends this disease, and is very often increased through a fullness of dung in the strait gut, for horses often find sudden relief from raking the dung out by the hand, so by removing the pressure on the neck of the bladder, a vent is given to the urine, which excites convulsions and sweats; these signs are common in the gripes, and in all cholics to which horses are any ways subject.

In the first place let the strait gut be examined, and if there is any quantity of dung, let it be raked out with your hands, then give the following medicine :

TAKE Nitre, in powder, three ounces,
 Castile soap, two ounces,
 Aniseed powder, one ounce,
 Opium, one drachm.

Dissolve these in a quart of warm ale, and give it the horse milk warm; this medicine I have given with the greatest success, when the symptoms were desperate.

If the above medicines cannot easily be procured, give the following :

TAKE a lump of common salt, about half a pound, put it into a good fire, and burn it till it is quite red hot, then take it out, and quench it in a quart of good ale, and give it the horse milk warm.

This medicine seldom fails of making a cure.

FOR THE STAGGERS AND CONVULSIONS IN A HORSE.

WHEN the staggers and convulsive symptoms arise, the horse looks dull about the head, with his eyes swoln, is feeble, reels and totters about as he moves, his mouth is generally stiff, but not quite shut up, with many more obvious signs which make it evident.

In the first place bleed freely, then let some person with a small hand, rake him thoroughly, and bring out the dung which lies in the strait gut, then give the following medicine :

MEDICINE.

TAKE Nitre, in powder, one ounce, oil of vitriol one tea spoonful, rub the nitre and oil of vitriol together in an iron or marble mortar, then add valerian, in powder, one ounce, snake-root, in powder, half an ounce, James's powder, two drachms, dragon's blood, half an ounce.

Mix these together, to be given in a quart of cammomile tea, and repeated according to the violence of the symptoms.



FOR THE WORMS IN A HORSE.

THE most usual cause of worms is foul or high feeding, which breeds crudities, and slimy undigested matter in the stomach and bowels; the following medicine may be given,

which undoubtedly destroys them, with the greatest safety, in any horse.

TAKE Petre or bay salt, two ounces,
Gentian powder, one ounce,
White hellebore root, in powder, half a
drachm.

Mix these together, then take a pint of warm water, and beat up a strong lather of soap there-in, then mix the above medicine in it, and give the horse the first thing in the morning fasting; this medicine may be given to any horse which is at work, or a mare in foal may take it with the greatest safety.

AN APPENDIX
CONTAINING
DIRECTIONS FOR THE EXTRACTING
OF CALVES.



DIRECTIONS

FOR

EXTRACTING CALVES.

To extract a calf when it presents itself in any improper position or unnatural way of lying in the cow, and in such postures that it cannot be extracted by the force of men and horses, without present death to either the cow, the calf, or both, until it is moved and replaced, so as to rectify the head and legs, placing them in such an extractionable position or proper form as is hereafter described.

When the efforts of nature are not too much exhausted or weakened, by rendering the necessary assistance in a suitable manner, the extraction in most difficult cases will be easily completed, and the calf brought from the cow without any injury either to the one or the other. Unless proper and timely relief be given, the cow or the calf is sure to be destroyed, to the utter loss of the owner, as I am confident great numbers of both have been lost in a moment, by people making an attempt to extract a calf

when it has been coming in a wrong position ; no one ought to go about the operation who is unskilled in the business, as too many within my observation have fatally done. I will therefore endeavour to lay down instructions every way sufficient and as plain as possible, which, if properly attended to, will be highly useful to individuals, and beneficial to mankind in general.



A NATURAL POSITION,

Is when the calf lies in the calf bed or bag. A natural form is when the calf presents itself with its fore-feet and head foremost, with its back upwards, or in the same direction as the cow's back, and the nose lying between the fore-feet.

OBSERVATIONS.

They who attempt the operation, must proceed with great care when they undertake to examine or search the cow, by using the gentlest means possible, taking a proper opportunity to do it, while the pains or throes of the cow cease.

This is to be done after the bladder of water has been seen, with other evacuations, that always make an appearance some time previous to the calf coming.

Then should the cow remain very restless, with strong pains or throes upon her, for ten or a dozen quick and violent motions, and no part of the calf to be seen, a thorough search must be made to find how the calf lies, in the following manner.

First supple the hand and the arm well with warm water, then anoint them with fresh hog's lard, and introduce the hand gently up the cow's shape, and carefully search round about the calf as far as the arm will admit of, so as to be perfectly satisfied of the exact posture the calf may lie, or be forced into, contrary to a natural situation, position, or form, which I have before described. See *natural position*. Much danger attends all unnatural extractions, I will therefore endeavour to lay down such methods as will prevent violent means being used, and substitute proper and gentle treatment, with different experiments to be practised in order to effect a safe and speedy extraction, in nearly all the improper postures of a calf lying, as many will be found on examination in several of the unnatural positions hereafter described. Due consideration must be taken, first to move and replace the calf, and put it into a position favourable for extraction.

This may at all times be done best when the cow is standing upon her legs; and the operator must be sure to get a right knowledge in what manner the calf lies, and adjust the head and legs before any further attempt is made to extract or draw the calf.

UNNATURAL POSITION, OR THE CALF COMING THE REVERSE WAY.

SUPPOSE a calf presents its tail where its head and fore-feet ought to be when it comes in a natural way, with the hind legs quite under its belly, do not make the least attempt to turn it; push or press the flat part of the hand to the haunches or hip of the calf, till it be removed back far enough to come at the hocks of its legs, when the calf is removed sufficiently back that the hand may raise up one of the hind feet at a time, by taking hold of the inside of the calf's leg at the hock, and pull at it there, the joint will bend so as the clees or horny part of the foot can be inclosed in the hand; this will prevent the foot from doing any injury to the uterus or the calf bag, such as tearing it, or bruising that or any other part in the cow.

The foot that is so inclosed in the hand is to be brought gently to the entrance of the cow's shape, and if a cord be fixed to it, it will be better. Then the person should proceed with the other foot and get it up into the same direction, and by the very same method the first was got up, or placed ready for extraction; when both the feet are brought together at the entrance of the shape in a regular situation, there is nothing more wanted in this case, but pulling quite steadily at the legs of the calf, to give nature the necessary assistance, observing to do it at the time the cow has her pains or throes upon her.

CAUTION.

It will sometimes happen while the operator is adjusting the calf's legs, &c. and placing them for extracting, the navel string of the calf may break, and from that a large quantity of blood will come rapidly upon the person; this should not be much regarded, as the redundancy will soon stop; this flooding is general with all cows at the time of calving.

The more expeditiously the calf is extracted, when it comes the backward way, the greater probability there is of saving its life; there is some danger of suffocation when the calf is obliged to be brought from the cow in that way, although it is quite as easy for the cow as any natural position.



UNNATURAL POSITION 2,

Is when a calf presents its two fore-feet, and the head does not appear with the feet and legs: in this case a long arm is very useful. Supple the hand, &c. as before directed, examine gently where the head is, and it will be found mostly doubled back over the hips of the calf, or perhaps it may lie against the ribs of it on the one side or the other; the situation of the head, will be at one time nearer, and another farther off, just as nature has placed it by the cow's motions.

When the calf's nose lies over its rump, much difficulty will arise in bringing the head into its proper place, which is between the fore-legs, that being a position suitable for extraction.

When the nose is not to be come at, the fingers must be got into the calf's mouth and take hold of the jaw bone, and return the head by that means. My method at all times in this case is to keep the arm in the cow to the full extent of it, when the head is so far back, till the pains or throes of the cow will enable me to fix the fingers in the nose or against the jaw of the calf; nature will greatly assist in forcing the calf nearer in this operation, if the person will keep his arm in the cow until the head can be completely adjusted. After that is done, the calf may be easily extracted, by pulling at the head and legs, duly waiting for the time when the pains or throes are on the cow.



POSITION 3,

Is when the calf presents itself sideways or nearly belly upwards, and the head turned back over the one shoulder or the other, with the legs appearing. Gently remove the calf back with the hand till you can bring the head forward with the legs into a suitable form fit for extraction, then proceed in the usual way as before-mentioned to bring it from the cow.

POSITION 4,

IN this posture the calf will be dead nine times out of ten, presenting its fore-feet and head quite under its brisket and belly. Push the calf back till the hand can be introduced to the nose. There is a considerable deal of strength and activity required from the exertions of the hand in this operation, to do it well; it chiefly depending on that to bring the head into its proper place, which is to be brought into the same direction as the feet, and placed with them at the entrance of the cow's shape ready for extraction. When the head is so rectified with the legs, the extraction will be done in the usual way, giving a little assistance at the head and legs, at a time when nature requires it.

It is in vain to attempt to bring the calf from the cow by pulling at the feet in this case, unless the head be first rightly adjusted.



POSITION 5,

THE head will appear alone, or presenting itself and neither hind nor fore leg with it; or perhaps the head and one fore leg only. Push back the calf with the hand against the shoulders or brisket, till room be had to come at the knee or knees of the calf, in this case the feet are generally folded under the calf's belly;

the hand must be got gently to the bend of the knee, and you must pull there by degrees that one of the feet may be got forward, so as the clees or horny part of the foot can be enclosed in the hand, which will prevent injuring the cow in bringing each foot to the entrance of the cow's shape, and in the necessary direction fit to be extracted from the cow, by giving the efforts of nature the usual assistance as before described.



POSITION 6,

THE head and one leg appearing, or the head without a leg with it: this may happen either way at different times. If the head should have appeared a few hours before the cow is discovered to be calving, as many are in that situation, the calf will be destroyed through the cow remaining in that restless state, frequently lying down and getting up in a hasty manner. This is occasioned by the violent agitation of the cow's throes or motions whereby the head will be greatly bruised and swelled, so as to make it too large to go back for the purpose of getting up the legs. The head to be skinned and cut off, if it is swelled so as to prevent extraction.

Take a sharp knife and make a slit from the poll of the head, beginning between the two ears, and bring the knife down to the end of the nose.

In skinning it, force the skin back over the first joint of the neck, and amputate it there. Then the calf will pull back by pushing at the neck or against the brisket, either of which is most convenient, to remove sufficiently to get up the feet, by taking hold at the knees of the calf and bringing them to the entrance of the shape, in the same way as the directions are given in the last position, to place the fore-feet proper for extraction. After that, place or wrap the loose skin which is left on the neck carefully over the rough and rugged bony part of the neck, that no injury may be done to the cow, by drawing the calf; some part of the loose skin must be pulled at, all the time another person is assisting at the legs, as the stump end of the neck where the head is taken from does not fix itself against the haunch bone of the cow, which will entirely stop the extracting the calf, and it must be put back again to release it.

POSITION 7.

A CALF may be found on its back, with its fore and hind legs folded nearly together over its belly, and close up to the cow's back, with the head appearing, or perhaps the head will be doubled back even with the ribs, on the one side or the other of the calf; or it may possibly happen in such a position that one of the hind legs may get to the entrance of the shape :

that must be put back, and the fore-legs and head brought forward ; always be sure to secure the clees of the calf safe in your hand, which will at all times prevent doing any injury to the uterus or calf-bag, whenever it is necessary to put the feet back or bring them forward to the cow's shape.

It is to be understood the calf cannot be extracted with one hind-leg and one fore leg coming together : very little judgment is wanted to make that discovery, there being such a difference between the hocks and knees of the calf as will be easily found out by the person that searches the cow.

All instrumental methods of extraction I wish to avoid as much as possible.

Many people use a hook to return the head of the calf, when lying in the situation I have described in the second position. This hook should be made of tough iron, about four inches long, leaving a crooked point at the one end, and a loop or hole at the other, for the purpose of fixing a cord to it. The hook is to be conveyed to the head of the calf, and the point placed either in the sockets of the calf's eyes, cavity of the ears, or in the mouth, whichever the operator finds most convenient to retain fast hold by : the head will replace by pulling at the cord, and by that means many return the head by this method placed in a position proper for extraction.

I would not recommend this method to be put in practice but as little as ever the operator can help.

My common practice is to keep the arm in the cow as before mentioned, (*see the second position*) till I can get hold of the calf's nose or jaw, which I have there directed to be done. Great danger attends using the hook, should it be moved out of the place it is fixed, as the cow's motions may get it out of its proper place, let whatever care will be taken, and the cow may receive such injury as will ruin and destroy her, should it catch and tear the uterus or calf-bag, or inwardly bruise any other part of the passage. It is impossible at all times to rely upon its keeping safe where it is intended to remain, while the head be returned into a right direction.

If the calf be dropsical, it will be known from the largeness thereof: and when the extraction cannot be made in the usual way, from the calf containing a large quantity of water, a knife should be cautiously used as follows, by piercing it into the entrail part of the belly of the calf; this will let out the water: when a dropsical calf comes the backward way, it will be safely and easily done, as the abdomen or lower part of the belly will be readily come at by guiding the knife up between the calf's hind-legs.

A description of several other positions might be added, but these being the most common within my practice, I trust that great utility may be gained from these plain instructions, by every one that wishes to be informed how to perform such operations.

A CAUTION

TO THE PRACTITIONER.

WHEN you attempt to make up any medicine or mixture, be sure to get your drugs genuine, fresh, and of a good quality ; for medicines composed of bad drugs can never produce the desired effect. A neglect of this caution will frustrate your expectations, injure the credit of the receipts, and cause them to be unjustly condemned.



Book taken apart, leaves deacidified with magnesium bicarbonate. Folds reinforced, leaves supported with lens tissue where weak. Resewed on linen cords with new all-rag endpaper signatures, unbleached linen hinges and hand sewed headbands. Rebound in quarter Russell's oasis morocco with hand marbled paper sides and vellum corners. Leather treated with potassium lactate and neat's foot oil and lanolin. February 1975.

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